

XIV. *Notes on the Diptera of New Zealand, supplementary to Prof. Hutton's last Catalogue of 1881.* By W. F. KIRBY, Assistant in the Zoological Department of the British Museum.

[Read October 3rd, 1883.]

IN the present paper I have not attempted to do much more than supplement Prof. Hutton's work with additional references, which he had overlooked; and to clear up those species named, but not described, by Adam White, which, though quoted by Walker as about to appear in the 'Voyage of the Erebus and Terror,' were never published in that work. The specimens of *Limnobia* are, however, so much damaged that I have not ventured to attempt to throw any further light upon them.

The total number of species enumerated by Professor Hutton is 119 (White's MS. species not being taken into account). Four species, including three of White's, are described in the present paper, and several others, passed over by Prof. Hutton, are noticed; but, on the other hand, various names have been sunk as synonyms, so that the total number of species admitted now stands at 123.

(The MS. of this paper was submitted to Baron Osten-Sacken, of Heidelberg, before publication; and he has favoured us with critical remarks on various points, which I have much pleasure in incorporating, with due acknowledgment.)

MYCETOPHILIDÆ.

Rhyphus neozelandicus, Schin.

? *Rhyphus phaleratus*, White MS.

The types of *R. phaleratus* agree fairly with Schiner's description, but in a series of specimens the legs are almost wholly yellow, with the tips of the tarsi blackish.

[I have a series of specimens. The *brown coxæ* are characteristic. At the same time a complete agreement is not to be expected, as the colouring of the body is variable.—O.-S.]

TIPULIDÆ.

Cloniophora Wakefieldii, Westw.

Gymnoplusia Wakefieldii, Westw., Trans. Ent. Soc. Lond., 1881, p. 372, Pl. XVIII., fig. 5.

Tipula senex, White & Butl.

Tipula senex, White & Butl., Voy. Erebus and Terror, Ins., p. 27, pl. vii., fig. 15 (1875).

Tipula Novaræ, Schin.

[Baron Osten-Sacken regards this identification as probable, but notes that Schiner's statement that the second spot is placed "close to the discoidal cell" is apparently an error for "close to the first discoidal cell." He likewise remarks on some apparent discrepancies in Schiner's description, such as his not mentioning the brownish longitudinal stripe on the abdomen; his calling the white lateral spots triangular, &c. I may add that we have nine specimens in the Museum, and that it appears to be a variable species, some of the specimens, which I cannot regard as specifically distinct, agreeing very fairly with Schiner's description.]

Tipula Dux.

Tipula Dux, White MS.

Long. corp. 6 lin.; exp. al. 17 lin.

Orange; head orange; basal joint of antennæ (the rest broken off), palpi, and most of the upper surface of the muzzle (which is moderately broad, obtuse, and set with short stiff bristles), blackish; base of palpi brown, a long black streak running forwards to a double point from the middle of the vertex. Thorax orange; front of prothorax and first pleural suture black; a wide black stripe on the back of the mesothorax, ceasing before the lateral suture, and with a brown extension on each side in front; and two wide black stripes on each side, starting at about one-fourth of the length of the mesothorax, and curving towards each other, but not meeting, in front of the scutellum, which is wholly orange. Abdomen

orange, with a broad black stripe on the back widened at the extremity of each segment, a black stripe on each side, and a central one (paler towards the base of the abdomen) beneath; legs black; front femora yellowish beneath. Wings hyaline, naked, iridescent, with short longitudinal folds along the outer half of the upper edge of the front basal cell, along the lower edge of the hind basal cell, and along the lower edge of the axillary cell; nervures brown; costal cells and stigma yellowish brown; the subcostal cell, as far as the stigma and the cubital cell, clear; a triangular dusky spot extending to the transverse nervure; halteres yellow, with the clubs black.

Tipula Clara.

Tipula Clara, White MS.

Head and thorax orange-yellow; antennæ, except the long basal joint, palpi, tip of muzzle, and a spot between the eyes, dusky; palpi set with short bristles. Abdomen black, with a stripe on each side, the incisions and anus yellow; coxæ yellow; legs brown; under surface shading into yellowish. Wings nearly as in *T. Dux*, but without longitudinal folds; the apex is clouded, and the triangular spot on the transverse nervure is smaller and more sharply defined; halteres yellow, with black tips.

Tipula obscuripennis.

Tipula obscuripennis, White MS.

Exp. al. 1 in.; long. corp. 6 lin.

Reddish brown above, with a greyish bloom beneath. Head reddish brown, with a white ring round the black eyes. Thorax greyish, with two contiguous reddish brown stripes occupying the middle above; they are divided by a narrow pale line, and are slightly narrower behind than before; on each side is a darker oval spot, which is continued on the metathorax. This and the scutellum are pale and shining, the latter edged with dusky behind. Abdomen reddish brown above, with an obsolete dark spot in the middle of each segment; 2nd segment almost entirely dusky. Legs tawny, with the knees and tarsi blackish. Wings hyaline, with the costal cell and the rather large oblong stigma pale yellow; halteres blackish, a transparent space in the costal cell, and the lower part of the hinder cell with small perpendicular folds.

Tipula viridis, Walk.

Tipula viridis, Walk., Ins. Saund., Dipt., p. 445 (1856).
? *Tipula holochlora*, Now.

I am indebted to Baron Osten-Sacken for this suggestion. Judging from the diagnosis (which is all that Hutton quotes, though Nowicki's description is lengthy) I had at first regarded *T. holochlora* as probably identical with *T. obscuripennis*.

Limnobia vicarians, Schin.

Limnobia chorica, White MS.

Limnobia fumipennis, White & Butl.

Limnobia fumipennis, White & Butl., Cist. Ent., i., p. 355 (1875).

Tanyderus forcipatus, Ost.-Sack.

Tanyderus forcipatus, Ost.-Sack., Verh. zool.-bot. Ges. Wien. xxix., p. 520, figs. (1879).

Dilophus nigrostigma.

Bibio nigrostigma, Walk., List Dipt. B. M., i., p. 121 (1848).

I am indebted to Baron Osten-Sacken for suggesting that this species is a *Dilophus*, as, on examination, I have found to be the case. But I cannot agree with his proposed identification of *D. nigrostigma* with *D. spectabilis*, Now., as the former species has a shining black pronotum in the male, and a uniformly red pronotum in the female.

Dilophus Zealandicus, Walk.

Bibio Zealandicus, Walk., Trans. Ent. Soc. Lond., (2), iv., p. 235 (1858).

Dilophus spectabilis, Now.

This identification is certain, but Baron Osten-Sacken was led to question it, because Walker's description is incomplete, the thorax being varied with black and dull red.

SIMULIIDÆ.

Simulium Australense, Schin.

Simulium Australensis, Schin., Reise Nov., Dipt., p. 15
(1868).

S. cæcutiens, White MS.

TABANIDÆ.

Pangonia Lerda, Walk.

Pangonia Lerda, White & Butl., Cist. Ent., i., p. 354
(1875).

P. larda, Hutt.

Pangonia Adrel, Walk.

Pangonia Adrel, White & Butl., Cist. Ent., i., p. 356
(1875).

Tabanus Sarpa, Walk.

Tabanus Sarpa (White MS.) Walk., Zool., viii., Suppl.,
p. lxx. (1850).

Tabanus truncatus, Walk.

Tabanus truncatus, Walk., Zool., viii., Suppl., p. lxxii.
(1850).

Tabanus oplus, Walk.

Tabanus oplus (White MS.), Walk., Zool., viii., Suppl.,
p. lxx. (1850); Butl., Cist. Ent., i., p. 356 (1875).

Tabanus impar.

Tabanus impar, Walk., Zool., viii., Suppl., p. lxxi.
(1850).

ACROCERIDÆ.

Apsona muscaria, Westw.

Apsona muscaria, Westw., Trans. Ent. Soc. Lond.,
1876, p. 510, pl. v., fig. 2.

ASILIDÆ.

Promachus floccosus, n. s.

Exp. al. 17 lin. ; long. corp. 10½ lin.

Black, with* dense tawny hair on the face, cheeks, and sides of the prothorax, more thinly clothed with hair of the same colour at

the base of the abdomen above, and on the whole body beneath, including the under surface of the femora and tibiæ; at the base of the four anterior femora beneath the hair is more dense, and shades into whitish; halteres and pulvilli orange-tawny, 2nd and 3rd segments of the abdomen with snow-white, diverging tufts on each side. Wings smoky hyaline; costa yellowish.

Opabo, New Zealand.

Described from a single male specimen received from Mr. H. W. Marsden, of Gloucester. Allied to *T. strenua*, Walk., from Celebes; but in that species the hairs on the under surface of the abdomen are decidedly whitish instead of tawny.

THEREVIDÆ;

Thereva (?) *bilineata*, Fabr.

Bibio bilineata, Fabr., Syst. Ent., p. 757, n. 3 (1775).

The type, in very poor condition, exactly resembles *Apiocera mærens*, Westw., in shape, but the neuration is quite different.

Thereva innotata.

Thereva innotata, Walk., Ins. Saund., Dipt., p. 455 (1856).

STRATIOMYIDÆ.

Odontomyia dorsalis, Walk.

Odontomyia dorsalis, White & Butl., Voy. Erebus and Terror, Ins., pl. vii., fig. 16 (1868).

Odontomyia atrovirens, Bigot.

Odontomyia atrovirens, Bigot, Ann. Soc. Ent. France, (5), ix., p. 520 (1879).

SYRPHIDÆ.

Syrphus novæ-zelandiæ, Macq.

Baron Osten-Sacken thinks it probable that *S. ortas*, Walk., and *S. rectus*, Now., are synonymous with this species.

MUSCIDÆ.

Tachina lupina, Swed.

Musca lupina, Swed., Nya Handl., viii., p. 289 (1787).

Tachina zelica, Walk.

Nemoræa nyctemeriana, Huds.

Nemoræa nyctemerianus (sic), Hudson, Tr. N. Z. Inst.,
xv. p. 218 (1883).

Appears to be closely allied to, if not identical with,
N. orasus, Walk.

Musca vicaria, Walk.

Musca vicaria, Walk., Ins. Saund., Dipt., p. 348
(1850).

Calliphora quadrimaculata, Swed.

Musca violacea, Walk., Ins. Saund., Dipt., p. 335.

Calliphora hortona, Walk.

Musca hortona, Walk. (1849).

Calliphora auronotata, Macq. (1855).

This species is easily distinguished from the last,
being only half the size.